REMARKS

The examiner maintains the position that independent claims 1, 35, 36, 39, and 56 are anticipated under §102(b) by Nielsen (US2002/0080863). In response, the applicants offer the following remarks. The claimed invention determines signal impairment correlations for use in received signal processing. Independent claim 1 includes the step of adapting model fitting parameters based on measured received signal impairment correlations and one or more model impairment terms using a fitting process. In other words, the claimed model fitting parameters are adjusted based on measured impairment correlations to "fit" the modeled impairment terms to the measured impairment terms. Independent claim 1 further includes the step of calculating modeled impairment correlations based on the adapted model fitting parameters. Each of the remaining independent claims (35, 36, 39, and 56) also include the "fitting process" limitation.

Nielsen describes a trial-and-error process for determining combining weights for a RAKE receiver to achieve a desired signal-to-noise ratio (SNR). In Nielsen, an Adaptive Generalized Matched Filter (AMGF) weight determination module determines combining weights by varying candidate combining weights until the SNR of the RAKE receiver output reaches a peak value (see Abstract). More particularly, Nielsen uses different total noise covariance matrices $\mathbf{R}_u$, where $\mathbf{R}_u$ may be calculated as the sum of a predetermined impairment $\mathbf{R}_{IND}$ and a measured impairment $\mathbf{R}_{DEP}$, scaled as a function of a scaling factor r_o, to determine different sets of combining weights $\mathbf{w}$. The AMGF module generates the different total noise covariance matrices by varying r_o while holding $\mathbf{R}_{IND}$ and $\mathbf{R}_{DEP}$ constant. For each of the resulting sets of combining weights $\mathbf{w}$, Nielsen determines a RAKE receiver output $\mathbf{z}$ and a corresponding SNR. Nielsen selects the combining weights $\mathbf{w}$ that produce the maximum SNR at the RAKE receiver output. See at least ¶s [0040] and [0042] – [0046].

It is important to note that Nielsen incrementally varies a scaling factor (e.g., r_o) applied to a measured impairment (e.g., $\mathbf{R}_{DEP}$) to generate the combining weights necessary to meet a

desired quality of service (e.g., SNR). Thus, even if *arguendo* Nielsen's process could be described as some sort of fitting process, as asserted by the examiner, Nielsen's process still does not scale modeled impairment terms to fit to a measured impairment correlation, as recited in the claims. As such, Nielsen does not teach or suggest adapting model fitting parameters used to scale model impairment terms to fit the model impairment terms to measured impairment correlations.

Further, the examiner argues that the repeated or updating process of Nielsen corresponds to the claimed recurring impairment correlation measurements used to generate the model fitting parameters of the claims. However, the pending claim language does not include or rely on recurring measurements of impairment correlations. Instead, the claims require adjusting model fitting parameters based on measured received signal impairment correlations and one or more model impairment terms using a fitting process. As the examiner's rejection has nothing to do with the pending claim language, the examiner's rejection is unclear.

Because Nielsen's process cannot be construed as equivalent to the claimed fitting process, Nielsen does not anticipate the independent claims or any claim depending therefrom. Thus, the pending claims are new and non-obvious over Nielsen. The applicants respectfully request reconsideration.

Respectfully submitted,

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